

What is Claimed is:

1. a high security switch comprising:
a base;
5 a lock cylinder comprising a plug defining a keyway rotatable relative to said cylinder upon insertion of a proper key and rotation thereof, said lock cylinder mounted to said base;
a cam operator mounted in fixed rotatable relationship with said plug and pivotable therewith upon rotation of said plug;
10 an arm pivotally mounted relative to said base and engageable by said operator for pivotal movement in response to rotation of said plug to define a switch state;
a first magnet carried by said arm; and
a second magnet mounted in fixed relationship relative to said base
15 and alignable with said first magnet upon pivotal movement of said arm to define a first mode defined by the relative opposed polarities of said first and second magnets.
2. The high security switch of claim 1 wherein said first mode is a
20 maintain mode wherein said first and second magnets attract and said arm is pivotally maintained in a given angular position.
3. The high security switch of claim 1 wherein said first mode is a
momentary mode wherein said first and second magnets repel and said arm
25 pivotally moves away from a position wherein said first magnet and second magnets align.
4. The high security switch of claim 1 further comprising an electrical
switch and said arm carries a pin which engages said electrical switch upon
30 movement of said arm to the first mode.
5. The high security switch of claim 1 further comprising a third magnet
mounted in fixed relationship to said base and alignable with said first magnet

upon pivotal movement of said arm to define a second mode defined by the relative polarities of said first and third magnets.

6. The high security switch of claim 5 wherein said first mode is a momentary mode and said second mode is a maintain mode.

7. The high security switch of claim 1 further comprising a third magnet and a fourth magnet, each mountable to said base and alignable with said first magnet upon pivotal movement of said arm to define second and third modes defined by the relative polarities of said first and third magnets and said first and fourth magnets.

8. The high security switch of claim 7 and further comprising two electrical switches each having two states and wherein said arm carries a transversely projecting structure which at spaced angular positions engages an electrical switch to change a state.

9. a high security switch comprising:
a base;
a lock cylinder comprising a plug defining a keyway rotatable relative to said cylinder upon insertion of a proper key and rotation thereof, said lock cylinder mounted to said base;

an arm pivotally mounted relative to said base and pivotally moveable in response to rotation of said plug from a first position to a second position;

a first magnet carried by said arm; and

a second magnet mounted in fixed relationship relative to said base and alignable with said first magnet upon pivotal movement of said arm to said second position to define a first mode defined by the relative opposed polarities of said first and second magnets;

an electrical switch mounted in fixed relationship to said base and having a displaceable actuator for defining a first state and a second state, wherein said switch changes from the first state to the second state when said plug is rotated from said first position to said second position;

10. The high security switch of claim 9 wherein said first mode is a maintain mode wherein said first and second magnets attract and said arm is pivotally maintained in said second position.

5 11. The high security switch of claim 9 wherein said first mode is a momentary mode wherein said first and second magnets repel and said switch member pivotally moves away from said second position when said first magnet and second magnets align.

10 12. The high security switch of claim 9 further comprising a third magnet mounted in fixed relationship to said base and alignable with said first magnet upon pivotal movement of said arm to define a second mode defined by the relative polarities of said first and third magnets.

15 13. The high security switch of claim 12 wherein said first mode is a momentary mode and said second mode is a maintain mode.

14. The high security switch of claim 9 wherein said arm further carries a transversely projecting structure which engages the actuator.

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15. The high security switch of claim 9 further comprising a third magnet and a fourth magnet mountable to said base at a third position and alignable with said first magnet upon pivotal movement of said arm to define second and third modes defined by the relative polarities of said first and third magnets and said first and fourth magnets.

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16. The high security switch of claim 15 wherein said second, third and fourth magnets are arranged along an arcuate path.

30 17. A method for setting the operate characteristics of a multi-positional switch wherein a plurality of switch positions are each defined by a pair of magnets comprising:

providing an extractor having a magnetic field strength which is greater than that of each of the magnets;

magnetically bonding said extractor to a said magnet;
removing the bonded magnet from said switch assembly; and
inserting a magnet having a selective polarity orientation into said
assembly.

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18. The method of claim 17 wherein said bonded magnet is a cylindrical member having opposite poles at opposite ends thereof, and further comprising reversing the orientation of said magnet.

10 19. The method of claim 18 wherein said inserted magnet is said reverse oriented magnet.

20. A method of setting the operate characteristics of a multi-positional switch comprising placing two magnets so that magnetic poles of each
15 magnet are selectively positioned in opposing relationship to either attract or repel to thereby define a pre-established operate mode.